

CONTINUOUS IMPROVEMENT PROJECT DATABASE

COMMUNICATION PROJECTS

Project Name	Project Description	Division	Project Year	Contact Name	Contact Number
Contract Resurfacing Guidelines	<p>Each year there is contract resurfacing on both the Primary and Secondary System. These contract needs are developed within the Division. Unfortunately, many times there is poor communication between the various departments. This causes the following problems: roads scheduled for resurfacing are striped just months before resurfacing begins; utility companies have plans for repairs or new installations and shortly after the resurfacing they open cut the fresh asphalt; roads are resurfaced and within a matter of a few years are dug up and patched to replace a failed drainage pipe.</p> <p>By providing and following the Contract Resurfacing Guidelines, the proper notifications are sent to the parties who need to know in advance of a scheduled resurfacing project. Utility companies are given the opportunity to make repairs in advance and to make repairs by open cutting the roadway rather than boring since it will be resurfaced soon. This preserves the quality of NCDOT resurfacing, reduces project overruns and allows for preventative maintenance.</p> <p>The Contract Resurfacing Guidelines are being implemented this year.</p>	Div 14	2009	Steve Cannon	(828) 891-7911
Stormwater BMP Device	<p>Stormwater runoff from paved roadways is documented to convey pollutants into adjacent waterways. The NCDOT constructs several types of stormwater Best Management Practice (BMP) devices that control and treat stormwater pollution runoff from a roadway project prior to entering adjacent waters. There are over 300 stormwater BMP devices currently installed in Division 5. A BMP Location Survey Form is completed for each device located in the Division. Early efforts to catalog the devices in the Division included sorting all the BMP Location Survey Forms by county and making them available to the District office.</p> <p>Parties that propose land-disturbing activities within NCDOT right-of-way (ROW) are required to submit an encroachment application (with a construction plan depicting the proposed activity) to the District Office. Three stormwater BMP devices were inadvertently destroyed through encroachment activities from 2007-2008. Sorting the BMP Location Survey Forms by county and making them available to the District office did not provide adequate protection to the stormwater BMP devices.</p> <p>Division personnel created a GIS data layer identifying the location of each stormwater BMP device in the Division using the latitude and longitude listed on each BMP Location Survey Form. This allows personnel to open up the GIS data layer (using ArcGIS) which identifies the location of each stormwater BMP device located in the Division with an icon. The process has recently been further refined to allow each icon to be hyperlinked with the corresponding Stormwater BMP Location Form. This process has been termed Division 5 Stormwater BMP e-tracking database.</p> <p>The District office can now review each encroachment application to determine if any stormwater BMP devices will be impacted by the proposed construction within the NCDOT ROW. This should result in the elimination of inadvertent destruction of stormwater BMP devices in the Division.</p>	Div 5	2009	Chris Murray	(919)220-4633
Road Oil Coordination	<p>With pavement preservation becoming a goal of maintenance, more coordination was necessary with other departments for maximum efficiency.</p> <p>Sampson Maintenance and Road Oil worked together to create a road oil program that helped both units achieve their goals. The patching operation and road oil operation were coordinated to work off of the same plan. Using a road conditioning survey, the CME identified roads in a segment of the county that qualified for possible road oil treatment and a map was marked using highlighters. The CME and Road Oil supervisor rode together on each road, and identified and agreed on needed treatment. A new map and spreadsheet were created with each road numbered in sequential order. All patching and crack pouring were performed well ahead of schedule.</p>	Division 3 - Sampson County Maintenance	2009	Carrie Holland	(910) 592-1434

Bridge Survey Report Preliminary Review	<p>Hydraulic Bridge Survey Reports were completed and sealed by Professional Engineers before submitting them to the Structure Design Unit. At times Structure Engineers disagreed on the most appropriate span arrangement or proper girder selection for a particular stream crossing. Requests for revisions to Hydraulic Bridge Survey Reports resulted in rework and possibly going back to a private firm at additional cost. There was no formal process in place to insure agreement between units and to prevent rework.</p> <p>At approximately 14 months prior to R/W the Hydraulic Design Engineer submits the draft layout to the Structure Design Engineer for review. He coordinates with the Bridge Construction Engineer and FHWA for comments on the proposed layout and selection of structure type. Within 13 months prior to R/W the Structure Design Engineer concurs with the layout as submitted or requests changes as necessary. At 12 months prior to R/W, the Hydraulic Engineer submits the Final Bridge Survey Report to the Structure Design Unit.</p> <p>The results of this preliminary review process of the Bridge Survey are that reports have greatly reduced, the amount of rework by the Hydraulics Unit. It has improved the lines of communication between the two Units. Input from the Construction Unit during the review process has also improved constructability and helped to avoid problems in the field after the projects are let to contract.</p>	Highway Design Branch	2009	David Chang	(919)250-4100
State Agencies Functioning Effectively Together	<p>There is a general lack of communication of information that would benefit the driving public.</p> <p>To improve communication and customer service the team provided existing equipment, DOT Message Boards, to State Highway Patrolmen to promote public awareness of "Operation Slow Down" program in an effort to make the highways safer to travel and save lives.</p> <p>SHP utilized the existing safety equipment to communicate the existence of their program to the public and the DOT increased their utilization rate for the message boards. By joining forces both agencies were able to provide the public with improved customer service, safer roads for all motorists, and the benefits of State Agencies Functioning Effectively Together Yearlong.</p>	Division 7 - Alamance County Maintenance	2009	Michael Venable	(336) 315-7080
Daily Crew Assignments	<p>Lack of communication between Supervisors and clerks, wrong information on FR1101's (ex. Wrong WBS, function codes, MMS task numbers, etc. I would have FR11's with incomplete work orders on it, not enough information on job sites, no MMS numbers, incorrect task numbers, and employees checked in on the board, but out of work.</p> <p>Solution:</p> <p>I created a spreadsheet in excel with all of the employees on it with special blocks for each Supervisor/CrewLeader. I created spaces for the Supervisor's to write down the employees with each Supervisor, their WBS elements, their function codes, their mms task numbers, their job sites. At the bottom of each sheet, I have all employees names with lines so they can check them if they're here or write out if they are not</p> <p>Results:</p> <p>This sheet if filled out daily, corrects 99% of the mistakes that I find on daily FR11's and helps me tremendously. If I am missing an employee, I can check on this sheet to see if they are with someone (in case they were left off of FR11 by mistake) or if they are out of work, etc. Also if the WBS element is wrong on FR11, I can check this sheet to see if numbers were omitted, if it was the right WBS element they were given or if the WBS was erroneously left off. If someone calls in and needs to know where a Crew is working, I can check this sheet to see what road they are working on and what Supervisor they are working with and get up with them quicker. IT SAVES me lots of time and makes my documents that I enter have FEWER errors (or incorrect information)!</p>	Div. 10, District 3, Anson Maintenance	2008	Tim Boland	(704)-982-0101
Stormwater BMP tracking database	<p>Problem: The NPDES Stormwater Permit and NCDENR-DWQ riparian buffer rule require the perpetual maintenance and protection of stormwater BMP devices. There are over 230 stormwater BMPs located in Division 5. The District Office requires information concerning the location of these devices in the Division when reviewing encroachment applications.</p> <p>Solution: Division staff evaluated the information collected on the BMP Location Survey form and determined there was a need to maintain a Division-wide tracking inventory of each stormwater BMP device. The stormwater BMPs in the inventory are separated by TIP construction number and then sorted based on location (i.e. county) supported by each District office in the Division. The District office is then provided a Stormwater BMP Tracking Database that contains a copy of each completed BMP Location Survey Form. The District office will review the database when reviewing encroachment applications.</p>	Division 5 Construction	2008	Christopher A. Murray	(919) 220-4633

DIP (Division Improvement Program)	<p>In 2006, Division 6 in conjunction with the GIS unit conceptualized the Integrated Cooperative Planning Procedure (ICPP) that was a method and tools to better plan how and where we should focus our bituminous operations and resurfacing efforts. The key components of this program involved dividing our counties into individual sections, focusing work efforts within a particular section, and developing tools to help determine which sections have priority. This method worked well for our Division and led to better efficiencies in our Bituminous Operations in particular.</p> <p>Building upon our positive results from the ICPP experience, our Division Engineer challenged management to begin to improve our operations in all areas under the guiding principal that pavements should be driving our maintenance decisions and activities. Thus, evolved the current phase of continuous improvement known as the Division Improvement Program (DIP). The primary expectation of DIP was to develop and implement processes that integrate the contributions off all units into a critical path in the areas of resurfacing, bituminous operations, vegetation management, secondary construction, and division design construct applications. During the process of developing the DIP, committee members soon learned that, although we all work for the same company, our individual units were all too often working in isolation without knowledge of what other units were doing or had the capabilities of doing. Due to this lack of coordination between units, we realized that we were not reaching the maximum benefit of what could be accomplished by working together from a unified game plan and, in fact, were being counterproductive to each other in certain operations.</p> <p>The result of this process improvement includes written processes and timelines that have been field implemented in the areas of resurfacing, bituminous operations, vegetation management, secondary construction, and division design construct applications. Several new plans and tools resulted from the efforts including a master paving plan for each District; 2-year plant mix resurfacing plans; 3-year bituminous operations plan; a division wide vegetation management plan (spraying and mowing); standard transmittal format for communicating upcoming work activities / needs between road oil, maintenance, and traffic; and a common environmental review format for tracking permit status. In all, the effort has led to the units working together to minimize 'mistakes' and get the most benefit possible by coordinating our individual work activities to work collectively toward a common outcome.</p>	Div 6	2008	Kenneth L. Clark	
GIS Maps for Projects	<p>Problem: Not being able to effectively communicate with ease to the different units, the public, contractors, and fellow co-workers about highway projects is an ongoing problem. Many times projects are discussed without all of the involved parties understanding what is being said. In NCDOT the projects consist of some kind of alteration to the surface of land. In doing this people want to know what is the impact. It may involve a new road, resurfacing an exiting road, utilities, drainage, landscaping, buildings, and many other items. Illustrating the concept from one person to another can become very complicated without visual aids</p> <p>Solution: The solution is a phrase most people have used many times, a picture is worth a thousand words. We used a local GIS (geographical information system) to create maps in a digital format or a hard copy. The GIS consist of many layers of data that included aerial photo maps, contour lines, roads, property lines and owners, CADD drawings, utilities, boundaries of counties, and cities, along with various other layers.</p> <p>Results: NCDOT representatives and employees can have help in illustrating the intent or purpose involving a project with visual aids, maps.</p>	Div 10	2008	Barrett Eatman	(704)-982-0101

Increased Public Awareness & Context Sensitive with Existing Systems	<p>Problem: As the number of registered vehicles increases throughout the State of North Carolina, traffic engineers and designers have had to deal with an ever-increasing amount of traffic on the State's highway system. This increase in traffic has created significant pressure on the system, resulting in increased congestion and the consequent loss of social and economic productivity. Traditional solutions to these types of problems have involved planning, designing and constructing new highways and additional public infrastructure. In the present circumstance, with declining revenues and increasing costs of highway construction, the ability of the State to continue on this course has been compromised in the extreme. As a result, new, creative strategies must be developed in order to take better advantage of our existing transportation assets. The solutions described in this document have, and should continue to have, a positive impact on the State's ability to maximize the efficiency and effectiveness of its current transportation assets.</p> <p>Solution: In order to address the issues described in the problem statement presented above, it is important to know what assets are available so that they can be effectively implemented and deployed. For the purposes of this discussion, the primary assets that are utilized are the portable Changeable Message Signs and overhead Dynamic Message Signs that are currently in the Department of Transportation inventory. The key to the success of this project is the use of these devices in circumstances and situations that will maximize the efficiency of the highway system. To accomplish this task, the Transportation Management Center has chosen to involve various stakeholders in a process that increases communication and understanding among the various players in the transportation environment. Through this process, relationships among participants have been improved and better communications have been established. This has allowed comprehensive regional planning to take place, particularly when significant events occur that transcends jurisdictional boundaries. Communications have also been improved using the State's TMS system in a manner that provides information to the public that has not traditionally been made available to them. This information includes graphic and geographic imagery, more user-friendly 511 information, as well as information specific to projects catalogued on the system. The overall strategy of engagement and creative uses of current technology has proven to be a viable solution to the problem of congestion and other related transportation management issues.</p> <p>Results: The result of these efforts include better understanding between various interest groups and an appreciation of their specific responsibilities, increased cooperation of agencies across geographic and philosophical boundaries and increased communications with the Department's primary customer, the traveling public.</p>	Triad TMC	2008	Michael Venable	(336)-315-7080
Maintenance Preconstruction Conference	<p>Problem: In 2006, Division 14 had 89 secondary construction and small construction projects to complete. These projects required several permits, including permits from Division of Water Quality, Land Quality, Air Quality, and Army Corps of Engineers. Unfortunately, the Division experienced project delays, noncompliance issues with permits, and strained relationships during the 2006 construction season. The primary cause of these problems was lack of communication between Division units and contractors prior to and during construction of projects.</p> <p>Solution: The Division implemented a required Preconstruction Conference, including a form, prior to the 2007 construction season. This form included critical dates for completion of construction and permits, as well as, individuals responsible for the project. It also gave assurance to project engineers and inspectors that projects had been properly planned and permitted prior to construction.</p>	Division 14 Operations	2008	Brian C. Burch	(828).586.2141
Secure Your Load	<p>Problem: Roadside litter is a problem in North Carolina. In 2006, the NCDOT spent more than \$16.6 million to remove more than 10.1 million pounds of roadside litter. More than 5,600 litter citations were issued by a multitude of law enforcement agencies. Yet the littering continues. Mecklenburg County Solid Waste and Recycling states that In North Carolina, half of all litter is blown, not thrown, from vehicles whose loads are not properly secured.</p> <p>Solution: The strategy is to continue litter cleanup events, education, prevention and law enforcement all of which are necessary to control littering. This project focussed on education and prevention by communicating to North Carolinians that securing loads will increase roadway safety and reduce litter.</p>	Office of Beautification Programs	2008	George Kapetanakis	(919)-715-2553
Environment Unit Data Warehouse	<p>Problem: The NEU tracked project information using an assortment of reports, databases and spreadsheets. Information tracked individual staff oftentimes was needed by the whole unit. This created a crisis if the staff member was out of the office and others could not retrieve the information. Additionally, if a request came in from other units, it presented a challenge to find out who had the answer to a particular problem.</p> <p>Solution: NEU surveyed its existing resources for tracking project information. We then solicited input from our customers to evaluate needs and existing data gaps. Finally, NEU partnered with NCDOT IT Web Services Team to develop a web accessible database that would enable better data storage and information sharing.</p>	Preconstruction-PDEA	2007	James Merrick	(919)707-2207

Facility/Shop Audit Check	<p>Problem: The safety audit had become a routine checklist that did not provide a means to track trends or provide information needed for decision making and upgrading facilities. OSHA compliance concerns were not given detailed attention and the diversity of equipment shops, maintenance facilities and office environments were not given consideration on the previous form. Comments and suggestions were separate from items being evaluated. Also, the previous form could not effectively highlight training needs. An evaluation tool with greater detail and more precision was needed.</p> <p>Solution: A workable audit tool was needed to provide information to decision-makers, communicate hazards to employees, reduce incidents and improve regulatory compliance. The Facility/Shop Audit Check was developed to address these needs.</p>	Operations - Division 1	2006	Jo Ann White	(252) 482-7977
“Under Construction: Trucking in the Work Zone”	<p>Problem: In 2005, there were 30 fatalities in North Carolina work zones. Although this number reflects a 40% decrease in work-zone related fatalities from 2004, there remains an obvious need for increased education about the hazards associated with driving through work zones. As an integral part of North Carolina’s economic infrastructure, professional truck drivers spend the majority of their time on the road. The amounts of time truckers spend in work zones will only increase as the state’s population continues to grow making work zone crashes involving large trucks significantly more likely.</p> <p>Solution: In an effort to educate professional truck drivers about the hazards associated with work zones and highlight their roles as one of NCDOT’s partners in highway safety, NCDOT and CAGC partnered with various trucking industry representatives to produce a video entitled Under Construction: Trucking in the Work Zone. The video highlights truckers’ responsibilities and provides them with tools for driving safely through work zones.</p>	Operations - Construction Unit	2006	Michelle Long	(919) 733-2210, ext. 221
Traffic Engineering Roundtable	<p>Problem: With the graying of the profession, North Carolina, like many other states, has found itself with a shortage of highly trained and seasoned professional traffic engineers. It is also without an effective regular accessible mechanism for traffic engineering professionals to network and work together to improve processes, and procedures. Recognizing the significance of professional development and the critical role that traffic engineers will play in addressing congestion, safety, regulatory, and access management issues, the need for an effective, ongoing, productive forum involving all of the state’s traffic engineers became apparent.</p> <p>Solution: The Traffic Engineering and Safety Systems Branch joined with the DOH-Operations to develop Roundtable Solutions forums. These were technically engaging and built on contemporary traffic and safety issues for NCDOT’s Field Traffic Engineers. The meetings were designed to provide consistent and, critical traffic engineering information in an atmosphere that promotes challenging the status quo and improving the level of service provided the traveling public by NCDOT.</p>	Operations - All Divisions	2006	A. D. Wyatt	(919) 733-1593
Ground Mounted Support Design Program	<p>Safety, consistency, and working productivity are issues that challenge NCDOT to improve. The Ground Mounted Support Design Program is a software solution that addresses all of these issues by communicating updated safety information to signing personnel while increasing design productivity and consistency.</p> <p>Larger ground mounted signs cannot be supported by direct driven posts. Steel beams in concrete footings are used to resist the large wind forces generated by these signs. The support chart’s fundamental task is to design beam sections and concrete footings from sign sizes and field conditions. However, drivers who have departed from the road are in danger of being hurt by hitting these steel beams. In response to this, the program incorporates the latest AASHTO breakaway requirements into the initial design, producing a safe crashworthy design. The final product becomes a complete solution to all support and footing design needs.</p>	Preconstruction-Traffic Engineering	2005	Clarence Bunting	(919) 250-4145
Benefits and Life Planning Workshop	<p>An employee approached the Division Engineer about the need to obtain information on planning for retirement, obtaining contacts for services such as investments, and obtaining information on choices that would need to be made prior to and after retirement. The Division Engineer put together a team to take the former Prepare workshop and redesign it to fit the needs of the division employees. Thus far, two workshops have been held beginning with employees closest to retirement status.</p> <p>In these workshops, speakers from the community are chosen to discuss such issues as nursing home/assisted living options, financial investments, financial/identity security, medical</p>	Operations- Division 8	2005	Mary Helms	(910) 944-2344

ICPP (Integrated Cooperative Planning Procedure)	<p>Division 6 wanted to find a better way to plan, coordinate and improve the efficiency of the Bituminous Operation with other units.</p> <p>The County Maintenance engineers and the Bituminous supervisor determined each counties annual resurfacing requirements. Counties were divided into sections that could be prioritized based on paving needs. This information was used to plan the work of Maintenance, Bituminous, Traffic and Roadside units within the section. Grouping work led each section to become more productive and cost effective. GIS assisted Division 6 by merging road treatment data with the Pavement Condition survey and Universe data, which was overlaid on GIS digital road layer. This allowed the division to select road segments by querying multiple road conditions at one time. The application facilitates a centralized means of communication between County Maintenance engineers, Bituminous supervisor, GIS and DDC unit.</p>	Operations- Division 6	2005	Greg Burns	(910)437-2611
Employee Training Profile Management System (Update & Revision)	<p>Since the implementation of Skill Base Pay and Competency Base Pay, training has become the focus of improvement projects. With many units in DOT conducting training and tracking training in various types of tools including paper tools, training records and data management was fragmented. Additionally, this was frustrating to employees, supervisors and managers who were trying to track training records, or analyze and report on various training data and information. To resolve this issue, a committee was formed to develop one web-based application that would serve the needs of all training groups, provide employees easy access to training records and information, and give management a tool to improve the productivity, efficiency, and effectiveness of training data management. Since its implementation, this system has given employees unlimited access to their individual training records and training data, allowed management to query the system and provide reports, and all information is in one central location.</p>	Human Resources	2005	Angela Crawford	(919)662-3582.
E-learning	<p>The Division of Human Resources has been looking for innovative ways to improve communication and customer service. With employees working in every county of the state, DOT faces many challenges regarding communication and information sharing among employees. With the implementation of Career Banding, training of employees has become more important than ever. HR decided to pilot e-learning which delivers training via the internet, intranet, audio/video tape, satellite broadcast, interactive TV and CD-ROM. HR implemented five pilot e-learning courses: (1) Introduction to Career Banding; (2) Mentoring as a Workforce Development Strategy; (3) Workforce Planning; (4) Unlawful Workplace Harassment Update, and (5) Unlawful Workplace Violence Update. DOT's e-learning courses are free, take little time to complete, and have no associated travel expenses, HR does not require prior supervisor's approval or going through the training coordinator. Just click on the links for e-learning.</p>	Human Resources	2005	Angela Crawford	(919)662-3582.
In the Zone Driver Education Kit	<p>As NCDOT works diligently to improve the states highway system, the safety of the public, NCDOT employees and contractors continues to be a challenge. Data shows that 221 people were killed in NC work zones between January 2000 and December 2004. An aggressive and effective education directed at safety and awareness in work zones is needed.</p> <p>Increases in the state's population and the number of work zones and related activities will put more motorists and tourists at greater risk. New drivers will face an increased number of work zones early in their driving careers. To better prepare new and inexperienced drivers for their roles as safe drivers in work zones, NCDOT partnered with ATSSA, IRTBA and NCHP to produce an educational video package entitled In the Zone. The video was filmed in a North Carolina work zone and features volunteers, construction personnel, NCSHP and NASCAR driver, Todd Bodine.</p>	Construction Unit	2005	Jimmy Travis	(919)733-2210.
Field Concrete Technician CD	<p>NCDOT's Concrete Field Certification is currently effective for 5 years. It involves classroom time, passing a written exam and demonstrations. Graduates of the program tend to forget procedures and tests during the period between certification and re-certification, plus there are also routine updates and changes to specifications and test methods. A method was needed to serve as a reference for technicians in the field.</p> <p>Materials & Tests Unit Concrete School personnel developed a CD that included information on the proper running of field tests used in the acceptance of concrete. It serves as a reference tool and learning aid for unit's Concrete Technician Certification Classes.</p>	Construction- Materials and Tests	2005	Walton Jones	(919) 329-4221.

Cyberstreet Internal Bulletin Board	Employees were finding it difficult to find manuals, organization web sites, employee policies and procedures, and engineering reference materials. Also, there was a need for employees to have a central location to receive information for meetings and employee functions. In addition, employees needed a common place to store and easily access training information, personnel materials and orientation information. An internal electronic bulletin board (Cyberstreet) was created using HTML. Cyberstreet is an internal webpage that is located on the server where all employees can access it. The homepage has links to each section in our unit along with links to the NCDOT homepage and our unit's homepage. There is room to place messages about any pertinent meeting that employees need to attend and important information they need to know. Cyberstreet has links to the NCDOT internal portal, directory, and Human Resources Manual. It is a quick reference for important information.	Preconstruction-Traffic Engineering	2004	Amanda Smith	(919)-250-4151.
Construction Career Days	One out of every 10 workers in the United States either directly or indirectly makes his or her living in the construction industry. The shortage of skilled craftsmen and construction equipment operators creates employment opportunities. The North Carolina Department of Transportation's On-The-Job Training Program and the Carolinas Association of General Contractors (CAGC) uses its Construction Career Days Program to make high school juniors and seniors aware of the opportunities available after high school. This program allows high schools students from across the state to talk with dozens of commercial contractors and NCDOT personnel about employment opportunities and careers in the construction industry. Representatives from industry and community colleges staff vendor booths, provide information, and give students hands-on experience with the latest equipment. Students experience the latest tools and equipment used by the construction industry, ask questions and get feedback. During the hands-on exercises, students get the opportunity to view heavy equipment, talk to the operators and see demonstrations of heavy equipment in action.	Construction	2004	Marvin Butler	(919)733-7174
Defining the GIS Distribution Center	The GIS Unit infrastructure is comprised of three technical operating sections: Mapping, Road Inventory and Program & Analysis. Together these sections provide Geographic Information Systems, Mapping, and Road Inventory services to the NCDOT. In addition, the unit is working cooperatively with other state, county, and local agencies to build a statewide digital spatial database. The GIS Distribution Center was created in 2003 to serve as the primary contact for geospatial information for the NCDOT. One of the many successful results was allowing county map creation and distribution in one central location, the GIS Unit. We experienced immediate growth receiving multiple map order requests daily.	Information Technology- GIS	2004	L.C. Smith	(919)212-6002
Special Alert Checklist	NCDOT strives to provide a safe and efficient transportation system for its citizens. Unfortunately, accidents occur everyday on North Carolina's highways that disrupt their travels. NCDOT has many mechanisms in place to provide information to the motorists about these disruptions including a website, the 511 Traveler Information Telephone System, Dynamic Message Signs, Highway Advisory Radios, etc. These resources are typically used by individual Divisions to provide information in their local areas. Before late 2003 there was no structured process in place to assure that information was disseminated across the state using these tools. In 2003 the ITS Operations Unit created a Special Alert Checklist which identifies all of the methods of traveler information available to let the public know about major accidents. The user can select all of the appropriate tools for the situation from this list. Contact information is then provided in a companion notebook that allows the user to reach all of the necessary parties to begin the process of regional or statewide traveler information.	Information Technology-Operations	2004	Kelly Damron	(919)-233-2330.
Environmental Pre-Let Review	The NCDOT is required to obtain various environmental permits for projects. This process involves the submitting permit drawings that depict impacts to the environment associated with roadway construction to the USACE and NCDENR-DWQ. Environmental permits state that all construction must be completed in strict accordance to the permit drawings that were previously submitted to the regulatory agencies. A comprehensive pre-letting review of active TIP construction projects in Division 5 revealed significant discrepancies at permitted sites between the roadway plans and permit drawings. These discrepancies could result in violations of the environmental permits if not addressed. The Division Environmental Supervisor identified all discrepancies and initiated modifications to the permits. Construction of projects at many permitted sites could not be completed until permit modifications were issued by the regulatory agencies. This resulted in significant project delays, as construction at the permitted sites could not be brought to conclusion in a timely manner.	Operations- Div 5	2004	Jon Nance	(919)-560-6851

DOT Training Inventory Catalog	The Human Resources Division's customers include those applicants applying for position at DOT, as well as the 14,000 DOT employees that it serves. Since HR considers the work force the most valuable DOT asset, it is always looking for innovative ways to improve communication and customer service. With people working in every county of the state, DOT faces many challenges regarding communication and information sharing among employees. Furthermore, with many units in the department organizing and implementing various train opportunities, training had become fragmented and there was no central point of contact for information regarding what training was available to employees. To make this information readily available to employees and provide supervisors and managers with an inventory of available training so that career development plans would be easier, a DOT training Inventory Catalog was developed. The publishing of this catalog took over a year to develop.	Human Resources	2004	Angela Crawford	(919)662-3582
DOT SECC Centralization	The Human Resources Division's customers include those applicants applying for position at DOT, as well as the 14,000 DOT employees that it serves. Since HR considers the work force the most valuable DOT asset, it is always looking for innovative ways to improve communication and customer service. The State Employees' Combined Campaign is no exception. For many years, the DOT campaign was fragmented with different areas of the department moving in different directions, different kick-off dates, processes and goals. State level campaign organizers directed information to central administration located in Raleigh to build support for the campaign in Raleigh/Wake County. Outside of Raleigh, employees in divisions and branches located in regional offices were receiving information from Raleigh-based division heads as well as local coordinators that often conflicted and confused regarding the process and submission of forms.	Human Resources	2004	Angela Crawford	(919)662-3582
TIP Developments	More and more developments are being constructed along TIP corridors before the TIP projects are constructed. When the development and TIP projects fall within City Limits, oftentimes curb and gutter and sidewalk are requirements for the developers to construct. I have had many projects where only preliminary plans have been developed for the TIP projects, and the projects are 5 to 10 years away. In these instances, requiring the developer to construct curb and gutter and sidewalk is useless when it will have to be torn out in the future and replaced at the department's cost.	Operations- Div 10	2004	Matt Weiss	(704)-982-0104
County Resurfacing History Map	Our office wanted a visual representation of the roads that have been resurfaced over the past years. I used a county map and highlighted the roads for respective years that they were resurfaced. I updated it each fall and I will start to include Moving Ahead and Senate Bill Projects. The pavement condition survey is helpful, however, with the highlighted maps, you can see which roads have been resurfaced and which areas have been concentrated on very easily. I use these maps when reviewing utility encroachment contracts. It allows me to easily review the utility route, and determine if it will be in conflict, or how strict we need to be with utility cuts in the pavement, placing spoil on the roadway, and location of the utility.	Operations- Div 10	2004	Matt Weiss	(704)-982-0104
Bus Placards	Each year trash finds its way to the 78,500 miles of roadsides maintained by NCDOT. This trash becomes litter when it hits the roadway regardless of its source. The NCDOT spends more than \$12 million annually to clean up roadside litter. Providing citizens information on what constitutes litter and that litter is illegal will help change the cultural practice of disposing of trash illegally. One item, cigarette butts, accumulates by the millions along the roadsides. These are difficult to pick up and take over a decade to decompose. The toxic chemicals in cigarette filters leach out slowly over the years and negatively impact the environment. A campaign was started to inform riders of mass transit buses. Some riders smoke and dispose of their cigarettes onto the ground to snuff them out prior to boarding. These discarded cigarettes butts become litter when they are left behind on the ground. These discarded cigarettes butts become litter when they are left behind on the ground. If cited by a law enforcement officer and upon conviction, this littering offense could cost the individual a fine of up to a \$1,000.	Construction-Roadside Environmental	2004	George Kapetanakis	(919)-715-3188.
Roadside Environmental Training/ Competition	Roadside Environment recognized the need to improve employee recognition for knowledge, skills, safety and environmental awareness as related to performance of the major operational functions of the unit and Highway Division. A 3-year training/ competition program was developed for personnel to promote work zone safety and environmental stewardship. It involved one year each in Roadside Roundup, Hydrodeo and Landscape Roaddeo. Participation from all 14 Highway Divisions was strongly encouraged. They had to meet the minimum criteria regarding classification, licenses and skill block completion. The format consisted of various stations with obstacle courses for trucks, targeted spray application areas, written examination/work exercises, equipment appearance/condition, troubleshooting, safety checklists, inspections, plant/weed identification, etc. The overall training experience was enhanced by lectures and tours. First and second place awards were presented at the NCDOT Roadside Environmental Annual Conference held in December	Construction-Roadside Environmental	2004	Ted Sherrod	(919)-7233-2920

Salt Works Poster	<p>The Highway Stormwater Program (HSP) has been trying to develop a simple but effective means of communicating with the various NCDOT field operation units across the State concerning stormwater related issues. HSP wanted to develop some type of media that defined potential stormwater impacts and preventive measures for various NCDOT operations.</p> <p>The HSP first wanted to relay environmentally sound steps for applying salt to roadways during the winter. Based on comments received from two earlier maintenance focus groups, the idea emerged to develop a poster on each stormwater topic of concern.</p>	Construction-Roadside Environmental	2004	Bob Holman	(919)733-2920
Colored & Uniformed Survey Stakes for Environmental Areas	<p>In summer of 2001, NCDOT initiated a new program to address environmental stewardship.</p> <p>A Division Environmental Officer (DEO) was created to assist field personnel in identifying environmentally sensitive areas. CPI team discovered that stakes were color coded red or white to identify sensitive areas, but had symbols that were confusing. Team decided to introduce a new color - pink - to identify environmentally sensitive areas. Since its introduction, no further mishaps have occurred and confusion has been eliminated. DEO meets with personnel to advise them of importance of pink stakes</p>	Operations Div 7	2003	Michael Venable	(336)570-6833
CEI Contract Administration Guidelines & Workshop	<p>In early 1990's, NCDOT wrote its first contract for private construction and engineering inspection (CEI) services.. No guidelines to aid in administering contracts or to describe program - only construction personnel served as resources.</p> <p>Team was formed to write guidelines and to conduct a series of workshops for NCDOT construction engineers and private firm personnel based on these guidelines. As a result, both NCDOT personnel and private firms have a better understanding of the CEI program.</p>	Operations Construction	2003	Jimmie Travis	(919)733-2210
The Book Federal FY 2003 Appropriations Requests	<p>NCDOT needed to develop a resource for NC's congressional representatives to use during appropriation bill process since there was no systematic effort towards influencing such bills.</p> <p>A working group was formed to develop a process for generating NCDOT's input for the FFY 2003 appropriations. Project resulted in The Book, a bound catalog of desirable earmarked projects categorized by US congressional districts and by all modes. Copies were delivered to NCDOT personnel, NCDOT's Federal Legislative liaison in Washington. They in turn met with NC's congressional representatives and provided copies. Subsequently, the FFY 2003 Appropriation Bill passed and NC's projects that were included came primarily from the wish list included in The Book.</p>	Program Development	2003	Moy Biswas	(919)715-2465
Safety City at the 2002 NC State Fair	<p>NCDOT strives to provide a safe, efficient transportation system for the traveling public.</p> <p>With increase in highway construction work zones across the state, motorists, tourists and construction personnel are at greater risk of injury.</p> <p>Over the last 5 years, 166 people were killed in NC construction, utility and maintenance work zones. A need for an aggressive and effective education effort directed at safety and awareness in work zones was realized due to the number of deaths. At the 2002 NC State Fair, NCDOT partnered with 9 other state agencies.</p>	Construction	2003	Jimmie Travis	(919)733-2210
Decision Aid for Wildflower Management Program	<p>Wildflowers are recognizable component of NC's Roadside Enhancement Program which tourists and citizens give positive feedback to the Department. Weed competition makes keeping these beds looking their best very difficult.</p> <p>NCDOT and NC State entered into an agreement to evaluate cultural and chemical management techniques for wildflowers.</p> <p>Greenhouse and field trials have been conducted on 28 species of wildflowers and the effectiveness of 31 herbicides on these wildflowers have been evaluated.</p> <p>An interactive CD which allows managers to cross-reference various combinations of wildflowers, herbicides and weed species to determine the best control methodology for specific planting sites.</p> <p>This CD is shared with Division personnel as well as other DOT's across the country.</p>	Roadside Environmental	2003	Derek Smith	(919)733-2920
Prima Facie (False Certification)	<p>The Vehicle Financial Responsibility Act of 1957 (General Statue 20-309) requires all vehicles registered in North Carolina to maintain financial responsibility (liability insurance, financial security deposit, or self-insurer). Per General Statue the state is obliged to revoke the license of those giving false information to DMV for operation of a motor vehicle. Once DMV is notified that liability insurance coverage has terminated, the customer is sent a request for verification of insurance. In the event of a discrepancy, a prima facie is processed and held for a set time until the customer responds. If the customer does not submit proof or pay a fine, the prima facie file is applied revoking the license plate. This manual process proved to be inefficient.</p>	DIVISION OF MOTOR VEHICLES	2002	Brenda Freeman	(919)861-3332.

Use of Nextels to Communicate with the Contractor	There has always been a problem in communicating with the contractor on a project. This problem existed at different levels. At times the head project inspector has a hard time locating and communicating with the project superintendent. Likewise, the DOT engineer frequently has a hard time reaching a project manager/engineer from the contractor. The contractor on the project was using the Nextel radio to communicate with each other. Our office had a possible solution to the problem. We asked the contractor if a couple of Nextel radios could be donated to our office for the duration of the project. One Nextel radio went to the Assistant Resident Engineer on the project, the other went to the head project inspector.	OPERATIONS - DIVISION 10	2002	Brady McKenzie	(704) 289-1330.
Creation & Implementation of a Utility Herbicide Request Form	By law NCDOT has governing authority over all vegetation growing along our rights of way. In order to accommodate utilities that wish to use these rights of way, NCDOT has prescribed to a standard permitting process. This permitting process was confusing and some utilities were unaware that they needed to obtain a permit to control vegetation under their power lines. In order to clarify the Department's position and to streamline the permitting process, NCDOT's Roadside Environmental Unit developed a Utility Herbicide Request form. This form is accessible via the NCDOT's website to North Carolina's major power companies and the State's 27 Electric Membership Cooperatives.	OPERATIONS - ROADSIDE ENVIRONMENTAL	2002	Derek Smith	(919) 733-2920.
Work Zone Safety Poster Contest & Calendar	It is the goal of the N.C. DOT to continuously provide a safe, efficient, customer-service driven transportation system for the citizens of North Carolina. The department faces many new challenges regarding the safety of highway workers and the traveling public. With increased growth throughout the state, work zones and construction-related activities are reaching a new historical high. There are currently over 400 major work zones across the state, which places North Carolina motorists and tourists at a potentially greater risk. In 2001, there were 30 motorists killed in North Carolina work zones. Since January 1996, over 180 people have been killed in N.C. construction, utility and maintenance work zones. These numbers confirm the need for an aggressive and effective education effort directed at increasing safety and awareness in highway work zones.	CONSTRUCTION & MAINTENANCE	2002	Jimmy Travis	(919) 733-2210
P. O. Contract - Advertising of Bids	Much work is let every month through the purchase order contract program. Some work is not on a specific route and is needed on an as-requested basis. P. O. contracts that did not require an on-site showing presented a problem as far as getting a contract package to the appropriate bidder. Contracts would normally be given out at the showing of jobs, which is sometimes mandatory. In the past (for non-showing jobs), entire proposals would be sent to each contractor on the mailing list. P.O. contracts range from 40-60 pages in length and may go out to as many as 90 different contractors. This resulted in an immense cost in postage and paper.	OPERATIONS - DIVISION 11	2002	Brian Hamby	(336) 667-9117
District Communication	The process of bringing a road from an unpaved route to a paved route requires many steps. These steps once required you to do extensive research at many different locations around the office to determine at what point in the timeline each route is located. The need to know what information is available is crucial to the time in which a road can begin construction.	OPERATIONS - DIVISION 11	2002	Brian Hamby	(336) 667-9117.
Access Sign In/Out Program	Administrative Support staff was unable to accurately identify office staff signed in and out of the office. To remedy the problem they followed the following steps: Develop and implement Access Sign In/Out Program. Load program on office PCs in start up menu for employees to use and update. Macro ensures accurate information updating in seconds. Each employee's name is alphabetized on the spreadsheet, which includes the office phone extensions. There are columns for Out Time and In Time, Day Left and Day Returning and Location which contain drop down menus which record time and allow the options for Meeting, Lunch, Sick, Annual Leave, etc. However, any reason can be typed in the Location column. Once all information is entered, the employee hits the Save and Refresh button. This action updates the spreadsheet for all employees running the active window.	OPERATIONS - DIVISION 10	2002	Cynthia Doby	(704) 982-0101.
Access to Skill Based Pay Manuals via REU Web Site	Over the last 5 years, NCDOT and its division field personnel have benefited from an innovative program referred to as Skill Based Pay (SBP). The program cornerstone rests in the employees who wish to become proficient in specific skills (e.g., operating equipment, obtaining state certification to apply herbicides, or learn advanced soil stabilization techniques). Once these self-motivated employees meet the objectives set forth in the training manuals and pass topic related final exams, the department rewards the employees monetarily. As divisions identify needs for employees with specific skills, employees are able to proceed with training by completing related Skill Block Training Manuals. Obtaining SBP Manuals was a time consuming and laborious process that was subject to mishandling	OPERATIONS - ROADSIDE ENVIRONMENTAL	2002	Derek Smith	(919) 733-2920.

Window Tinting	The Ahoskie District Office Building has historically suffered from inadequate HVAC, specifically, air conditioning. Temperatures in offices located on the south side of the building often reached 80 degrees during time of bright sun. The problem existed regardless of the air temperature outside. In an effort to improve work conditions within the office, revisions to the existing HVAC were investigated. The costs of the necessary modifications approached \$50,000. Given the unavailability of funds, other options were considered. The most economical solution found was the application of window tinting in the affected offices. Contacts were made with local vendors, but none could provide the necessary materials. A search of the Internet yielded a wholesale company that could provide material at a very reasonable price. The necessary paperwork was completed and the material shipped. A member of the District Office Staff then installed the tinting.	OPERATIONS - DIVISION 1	2002	C. W. Bridgers	(252) 482-7977
NCDOT Annual Statewide Model Bridge Building Competition	In 1999, the Human Resources Unit, assisted by the Construction Unit, developed the first NCDOT Model Bridge Building Competition. The competition, which complemented educational outreach programs already offered, addressed the need for new methods of recruiting civil engineers. The number of college graduates entering the engineering profession had dropped significantly. It was believed that if students' interest could be sparked as early as middle or high school, perhaps more college students would consider careers in engineering and other transportation fields; hence, the Bridge Competition Committee created this innovative, hands-on approach to learning. The competition would stress the importance of excelling in all school subjects by including a written report, oral presentation, Design Drawing, and Model Efficiency.	HUMAN RESOURCES & INTER-GOVERMENTAL	2002	Helen Dickens	(919) 733-7686
AG's Office Crash Report Retrieval Project	Each year the AG's Tort Claim Section processes thousands of tort claims against the State of North Carolina. The Tort Claim Section addresses all general liability claims made against the state. Regardless of a case's outcome, the crash report (DMV-349 Form) is one of the most important records that must be viewed in order to better understand the case and further defend the state in motor vehicle crashes. Traditionally, the Tort Claim Section obtains this document by sending staff members to DMV to complete forms to request hard copies of crash report. TSSMU and/or DMV personnel retrieve the crash reports, print copies, and send them back to the Tort Claim Section as requested.	PRECONSTRUCTION	2002	Tony Ku	(919) 733-5418.
On-Line Bidding	The NCDOT Highway letting process has remained unchanged for decades. Contractors have been required to attend highway lettings in person, physically delivering their bids and witnessing the opening of bid proposals. This required contractors to travel from all parts of the state to Raleigh once a month and arrive in time to attend the 10:00 a.m. letting. In most cases, this resulted in appreciable expenses to the contractor for travel, lodging, and sustenance as well as lost production for personnel attending the letting. Even though we furnished diskettes to the contractors to facilitate their bid preparation, the Department required and only accepted hand-signed printouts as official bids. Also, DOT expended considerable resources in purchasing and preparing diskettes, travelling to the letting, and hand entering bid information into the letting system.	PRECONSTRUCTION	2002	Randy Garris	(919) 250-4124
"SMARTZONE" on I-95 in Cumberland County	NCDOT needed a system or method to mitigate traffic backups and delays on TIP construction projects through the use of intelligent transportation technology deployed for "workzone" applications. The I-95 corridor has a past history of crashes and fatalities during major construction projects. Our goal was to find a system that would offer "real time" traffic information that would reduce backups, which contribute to congestion and crashes. The team developed conceptual drawings and a specification that utilized available technology in a "portable" system that works independently of human intervention, thus creating a "SMARTZONE". The system consists of changeable message signs, traffic sensors, cameras and computer software that calculates delays, measured in minutes in the workzone. These delays are displayed on the changeable message signs in a "real time" manner via wireless media.	PRECONSTRUCTION	2002	Steve Kite	(919) 250-4151
Information Transmittals	The need for timely transmittals of guidelines and policies to employees of the section is crucial for maintaining consistent and efficient customer service. Guidelines and policies impact not only employees of the section but also others that do business with the section such as engineering firms, attorneys, private citizens and other NCDOT units and sections. Traditionally guidelines and policies were given to employees at meetings and/or through the dissemination of paper copies. When a prior implemented guideline was needed, time was spent researching and tracking down the paper copy. In an effort to remedy this problem and provide employees with timely and consistent notification of guidelines and policies, a public drive was established on the section's computer network to accommodate scanned and electronic documents. All employees have read-only access to this drive.	PRECONSTRUCTION	2002	Richard Mullinax	(919) 733-5569

Area Traffic Database	<p>The Area Traffic Office is a multi-task operation responsible for a variety of work that requires a diverse filing system. Files include TIP Projects, WProjects, Spot Safety Projects, Fatal Investigations, Governor's Highway Safety Program Studies, Signals, Intersections Studies, and Railroad Crossing Studies. The nature of these studies and projects makes it difficult to track files, find related files, or determine if a location had ever had a study conducted. It required physically searching the file cabinets, sometimes with little information. A great deal of time was lost determining if there was an existing study or project on a location, and then it could take from 15 minutes to 2 hours to locate the file. Attempts were made to organize the system but there was no central database to handle the entire file. In addition, there was no electronic capabilities established to produce related forms or reports that had to be developed by physically gathering information from related files, then compiling the data manually. This process could take anywhere from an hour up to a day to complete.</p>	PRECONSTRUCTION	2002	Janet Whetstone	(910) 437-2614.
Administrative Tracking	<p>Tracking incremental salary raises for TEI Trainee and probationary status with dates had become an administrative paper trail nightmare. As we have gotten more comfortable with Netscape calendar and learned its usefulness as a task-tracking tool, we realized how the probationary period and incremental trainee raises could be noted on key dates for responsible parties to handle at the appropriate time. Administrative staff schedules notes with reminders for the employee, immediate supervisor, section head and clerical supervisor on the calendar so that incremental raises will occur on a timely basis. This practice eliminates dealing with Personnel on retroactive salary issues.</p> <p>Administrative staff will enter reminders of employees on probationary status on the calendars of the immediate supervisor and the section head. Nine months probation will be used initially, but section head can request that they come off probation earlier if they so desire.</p>	PRECONSTRUCTION	2001	Peggy Barnhill	(919) 250-4151
The Beacon" Unit Newsletter	<p>In order to minimize unit-wide emails and to improve information sharing within the Traffic Congestion & Engineering Operations Unit, a committee was formed to develop a monthly newsletter. The newsletter is predominantly distributed in an electronic format using HTML and placed on our unit's server so our employees can view the newsletter from their workstations. Using HTML also makes it possible to include live links to any referenced web pages and email addresses. A PDF version is also available for anyone that does not have access to our server. This version is forwarded to interested individuals each month in addition to the release of the newsletter to unit employees. The newsletter announces employees that are joining or leaving the unit as well as anyone receiving a promotion, technical articles, section accomplishments, special projects and tips for improving various work-related tasks are submitted each month and included. Birthdays, volunteer opportunities and even employee highlights touch on the personal side of the unit. The newsletter also introduces and provides updates on various professional organizations relevant to our employees to encourage extracurricular career development.</p>	PRECONSTRUCTION	2001	Jeffery Dale	(919) 250 4151
TCEO Unit Orientation Checklist	<p>The majority of the personnel issues are covered by the new employee orientation that is offered on the first Monday of every pay period. Our checklist was revised to serve as a supplement of this training. The checklist has two major parts, the Operational Functions and the Administrative Functions. The Operational Functions has eight parts that include: 1) Introduction to the Administrative Staff; 2) Work Hours; 3) Telephone Operation; 4) Computer; 5) Layout; 6) Safety/Equipment; 7) Seating Assignment; and 8) Organizational Chart. The Administrative Functions portion includes six sections: 1) Time Sheet; 2) Supplies; 3) copiers/Printers/Plotters/Fax Machine; 4) Cutting/Trimming Machine; 5) File Room; and 6) Mail. Each of these sections is then broken down into anywhere from tow to fifteen check items.</p>	PRECONSTRUCTION	2001	Ron King	(919) 250 4151
Fatal Accident Database	<p>As part of the Area Traffic staff, the Area Accident Investigation Engineers are required to investigate fatal accidents. There are five Area Offices located across the state with each office responsible for a certain section of the state. Information gathered as part of the accident investigation includes a copy of the accident report, the date and location of the accident, specifics of the accident (alcohol and seatbelt usage, age of driver, etc.), accident site information (road geometrics, signing, etc.) and the remarks and recommendations of the Accident Investigation Engineer.</p> <p>The Fatal Accident Database was developed to better handle this information. Following an investigation, the information gathered is entered into a database file. The database will allow the engineer to quickly reference this information in the future. For example, if the Accident Investigation Engineer wanted to find all the fatalities that he or she has investigated on a particular road or highway in the past year, searching the database would take considerably less time than searching through the hard copies kept in a filing cabinet.</p>	PRECONSTRUCTION	2001	Scott Collier	(919) 233-9331

Safety Project Development Guide Website	The evaluation of safety projects determines what type of projects work best to improve safety at a particular location. Project evaluations provide feedback to the project development engineers so they can select cost effective projects in a timely manner, thereby improving the safety and efficiency of North Carolina's roads. This web site was developed to provide support to engineers in a consistent and convenient manner. The web site has opened a channel of communication between safety evaluation engineers researching traffic safety statistics and the traffic engineering field engineers who use the safety statistics in their daily jobs. As engineers evaluate previous safety projects and discover countermeasures and crash reduction factors pertinent to certain situations, that statistical data is made immediately available via the web site. The online tool aids the traffic engineers in developing safety projects by organizing and disseminating necessary information into an easily accessible format, which will save man-hours and improve the overall project development process.	PRECONSTRUCTION	2001	Laura Slusher	(919) 7331593
Work Zone Traffic Control Rodeo	A wide range of Traffic Control Devices is used in the maintenance of traffic in a work zone. With 14 divisions statewide and approximately 70,000 miles of state maintained roads, the Traffic Control Section saw a need to develop the 2001 Work Zone Traffic Control Rodeo to train NCDOT, municipalities, and private industry in maintenance, troubleshooting and information on specific devices. The Rodeo was compiled of 7 classes that were attended by all participants; Overview of Work Zone Elements, Advance Warning Signs, Electronic Advance Warning, Channelizing Devices, TMIA's and Crash Cushions, Work Area Protection and Other Work Zone Devices. Each class focused on theory, installation, maintenance, usage and troubleshooting of the respective devices. Manufacturing industry, the contractor, NCDOT field personnel and the Traffic Control Section provided class materials. This collaboration insured the material taught was informational, accurate and included the latest technology.	PRECONSTRUCTION	2001	Meredith McDiarmid	(919) 250-4159
Literacy Improvement Program	It was felt that NCDOT could do more to help its employees improve their literacy. The Secretary commissioned HR to examine the possibilities of setting up a formal structure so literacy improvement opportunities could be continuously offered to all DOT employees at all literacy levels. A Literacy Committee was established to study literacy levels of DOT employees, and establish a literacy program. The first task was to determine the literacy levels in the organization. We enlisted the help of the North Carolina Community College System (NCCCS). They recommended the Comprehensive Adult Student Assessment System (CASAS) and agreed to administer it for us. Our selected sample groups came from the Division of Motor Vehicles (30% randomly selected) Century Center (30% randomly selected) and 3 counties in one of the 14 Divisions (all employees in the counties). Lists of all names for the first two groups were provided to our Information Technology group, who made the random selection of testees. Testing dates and locations were coordinated with NCCCS personnel. We attempted to minimize the travel time for employees. The testing was completed and the report submitted back to us on 1 Nov 00. Roughly 50% of DOT employees could use some help. A formal policy was written, coordinated through the heads of major DOT divisions and subsequently approved by the Secretary on November 13, 2000.	HUMAN RESOURCES & INTER-GOVERNMENTAL	2001	Angela Strach	(919) 733-5846
State Employees Wellness Fair	The Department of Human Resources' customers not only includes those applicants applying for positions at DOT, but they also include the 14,000 DOT employees that the division services. Since HR considers the work force the most valuable DOT asset, they are always looking for innovative ways to show appreciation for, support, recognize, honor and help employees. Studies done by insurance providers suggest that, due to medical expenses, state employees may neglect their health, avoid preventative medical care, and are often a high risk for problems such as high blood pressure and cholesterol. An Employee Wellness Fair was designed to educate employees about the importance of preventative health, safety, and physical and mental well being. After DOT began putting on a Wellness fair, several state agencies approached DOT about co-coordinating a wellness fair for all state employees. A State Agency Wellness Committee was formed whose purpose was sponsoring a multi-agency Employee Wellness Fair for Raleigh-based state employees. The Wellness Fair provides state employees an opportunity to check cholesterol levels and to learn ways of reducing their HDL and Tri-glycerides. Other screenings include glaucoma tests, stress and allergy tests, hearing test and spinal examinations.	HUMAN RESOURCES & INTER-GOVERNMENTAL	2001	Angela Strach	(919) 733-5846

Tying Balanced Score Card to Performance Management System	<p>In 1999, the Productivity Services staff developed and implemented a Balanced Score Card system to measure individual performance and effectiveness in providing services to the department. To further enhance this system, the staff embarked on tying the results of Balanced Score Card measures attained by each staff member to his or her Performance Measurement evaluation.</p> <p>The three Balanced Score Card measures used (client ratings, staff cost versus hiring outside consultants, and percentage of project objectives achieved) represent three of the five rating criteria for the key responsibilities portion of the Performance Management review. As with all other Performance Management dimensions, each Balanced Score Card measure is defined in terms of staff expectations in order to meet prescribed levels of performance ratings, as well as required documentation to validate the performance rating.</p>	FINANCIAL	2001	Ron Oates	(919) 733-2083
Automated Leave Request	<p>Personnel regulations require that employees submit leave requests to the supervisor in order to take time off. In the past a Leave Request Form was completed by the employee, submitted to the supervisor via mail system, the supervisor approved the request by signing the form, and then returning it to the employee. This took anywhere from an hour to several days depending on schedules.</p> <p>To eliminate the paperwork and to reduce the time to receive approval, the team developed an Automated Leave Request System. By using the LAN and PC system, the employee selects New Daily Note on the date for which he/she requests leave on the Netscape Calendar. The employee enters the supervisor's name and records their name and the time for which he/she requests leave. Their request appears on the supervisor's calendar. The supervisor selects the keep in agenda to indicate approval. The employee can check their calendar to know if it has been approved.</p>	FINANCIAL	2001	Ron Oates	(919) 733-208
In The Loop A Monthly Newsletter for Employees of NCDOT	<p>With 14,000 people working in every county of the state, NCDOT faced many challenges regarding communication and information sharing among employees. Several years ago, the department published a paper based employee newsletter called theExtra Mile. The cost and procedures associated with printing and mailing it caused the newsletter to be out of date by the time it reached all units and divisions.</p> <p>To remedy this, Secretary Tippet requested a new, web-based newsletter to be produced and distributed by the Public Information Office. The goal is to provide information to help employees do their jobs better. These features include news from the field, project profiles, training and development resources, safety tips and announcements from Human Resources. Another goal is to encourage communication among all employees in every unit in every county. Features include human-interest stories, employee profiles and employee awards and achievements. Newsletter correspondents were recruited from divisions and units across the department. It was determined that the web provided the quickest and most effective method of distribution.</p>	PUBLIC INFORMATION	2001	Cherie Gibson	(919) 733-2522
Road Oil Database	<p>There has always been difficulty keeping records on the paving history within the division and providing access to this information to all departments. With the creation of a division database to record all aspects of the paving of each road, county engineer now have access to all pertinent information regarding the roads paved in their county. Road ratings can also be integrated in the database to provide rating information on all primary and secondary roadways within the division. Traffic services also gets a biweekly printout including length, to and from, to assist them in planning for the markings.</p>	OPERATIONS DIVISION 9	2001	Noel Chilton	(336) 896-7019
Secondary Road Construction Tracking Form	<p>District 3 recognized the need to streamline the process of tracking secondary road construction projects. Projects were being tracked separately by the District Engineer, County Maintenance Engineer, and Assistant District Engineer causing a coordination problem between the three. No set form was available for quick reference that listed information needed to coordinate the purchase order and maintenance construction programs, resulting in a loss in the amount of road miles that could be constructed within a reasonable time frame. Ideas were submitted from the three parties regarding information they needed in the construction process. A form was then developed to show all the needed information from the three parties. Every month the sheet is updated at each maintenance office and forwarded to the District Office where the information is compiled on one form and emailed back to the individual maintenance offices.</p>	OPERATIONS DIVISION 11	2001	B. K. Hamby	(336) 667-9117

Procedures for Selective Vegetation Removal (SVR) Permit Processing	<p>In August 2000, the Division Roadside Environmental Departments (statewide) were given the responsibility of managing all aspects of the Selective Vegetation Removal (SVR) policies within the Outdoor Advertising Control Program. After a few weeks of learning the various aspects of the new responsibility by trial and error, it was determined that a written step-by-step process was needed in order to coordinate the responsibilities within the Division Four Roadside Environmental Department. A small work group was formed to review the entire process from start to finish, in accordance with the revised SVR policy and to develop the permit process.</p> <p>A written 30-step process was developed to cover most potential situations that may occur within the selective vegetation removal permit process.</p>	OPERATIONS DIVISION 4	2001	Don Smith	(252) 237-6164
Work Zone Education & Safety Program	<p>The safety of highway workers and the traveling public throughout the state continues to be one of the most important challenges the department must face. NCDOT continuously strives to provide a safe, efficient, customer-service driven transportation system for the citizens of North Carolina. Construction on North Carolina highways is reaching a new historical high. With increased growth throughout the state, work zones and construction-related activities also are reaching unparalleled proportions. There are currently over 400 major work zones across the state. The increase in highway construction work zones places North Carolina motorists and tourists at a potentially greater risk. Data shows that 151 people were killed in N.C. construction, utility and maintenance work zones between January 1996 and December 2000. This number alone confirms the need for an aggressive and effective education effort directed at increasing safety and awareness in highway work zones. In April 2000 & 2001, the NCDOT kicked off a Work Zone Safety public information initiative -- Speed a Little. Lose a Lot. -- targeting speeding in the work zone.</p>	DIVISION OF HIGHWAYS	2001	Jimmy Travis	(919) 733-2210
Go wild with the NC Wildflower Program Video	<p>The Office of Beautification Programs and members of the Roadside Environmental Unit's vegetation management team developed a 5-minute instructional video to teach anyone from the wildflower enthusiast to the master gardener how to plant a wildflower garden. A vegetation management expert demonstrated the necessary steps to plant a wildflower garden in the video. The narrator of the video was Mike Gray who is a well-known gardening guru and has his own show The Almanac Gardener that airs on UNC-TV. The video was produced in response to numerous inquiries by the public, media, garden clubs and county extension offices to learn how we prepare and maintain wildflower beds with such success. Garden clubs and county extension offices each received a complimentary copy of the video that has been made available for people to check out.</p>	OPERATIONS ROADSIDE ENVIRONMENTAL	2001	Heather Thompson	(919) 715-2553